

ABSTRACT OF THE DISCLOSURE

A cooling chamber **10** for a microtome **1** is disclosed. A knife **2** having a cutting edge **16** is arranged in the cooling chamber **10** opposite a sample holder **4** having a sample **4a** retained therein. The microtome **1** further possesses a stereomicroscope **12** having an optical system **14**, the optical system **14** defining an optical axis **11**. The region of the sample **4a** and of the cutting edge **16** of the knife **2** is observable with the stereomicroscope **12**. There is mounted in the cooling chamber **10** an illumination system **20** that emits light **20a** and is directed onto a surface **2a** of the knife **2** in such a way that the light **20a** reflects from the surface **2a** parallel to the optical axis **11**.